



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE AMERICAN ANTHROPOLOGIST

VOL. XI

WASHINGTON, D. C., OCTOBER, 1898

No. 10

THE PEOPLES OF THE PHILIPPINES

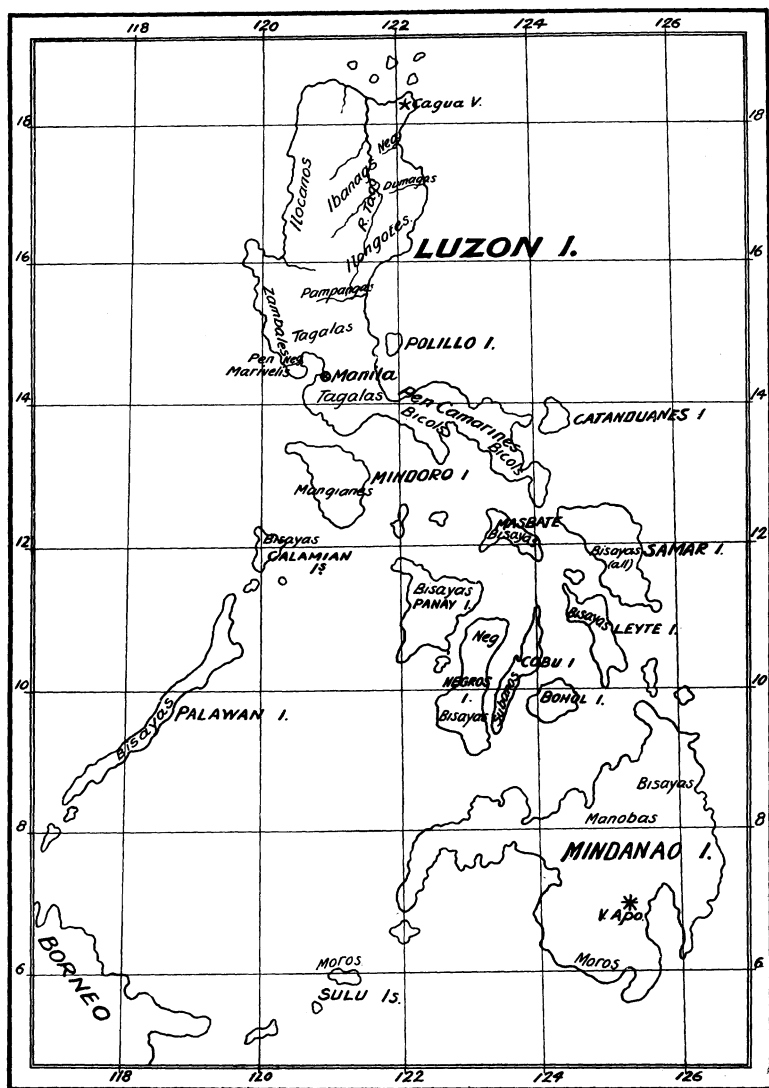
DANIEL G. BRINTON, M. D.

The prospect of adding the Philippine archipelago, in whole or in part, to our own territory lends peculiar interest at this time to the study of its strange and varied population; and as the ethnologist always seeks to examine man in relation to his environment, I shall begin with some brief references to the geography and geology of the islands.

Geography.—Exactly half way around the globe from Porto Rico and on the same parallel of north latitude, the twentieth, lies the island of Luzon, the largest and the most northern of the main group of the Philippines. Its northern coast is fringed with the islets known as the Babuyanes, celebrated for a small but strong breed of horses, while south-southeast of these, for a full thousand miles toward the equator, lie scattered in the tropic seas islands of all shapes and sizes, fourteen hundred and thirty in number according to the last count, but nearer two thousand when all are reckoned.

Luzon is the largest, with 41,000 square miles, just about the size of the state of Ohio, and Mindanao comes next, with 35,000 square miles. The total area of the archipelago is put down at 114,000 square miles, which is equivalent to that of New York state and all the New England states combined. The climate is tropical in the fullest sense of the word and the vegetation most luxuriant.

Geology.—In its geologic formation the Philippine archipelago offers a strong contrast to the great islands of Borneo, Sumatra, and Java, which lie near it. These are the fragments of a vast continental area built up in eocene times, at first united to the



ETHNOGRAPHIC MAP OF THE PHILIPPINES. BY D. G. BRINTON

mass of Asia, but torn from it by some cataclysm in pliocene days. The Philippines, on the contrary, are of much later construction. They are volcanic and coralline, and have been elevated so recently that the coral insects which built their cliffs and hills are as species not extinct, but survive in the adjacent seas.

The lines of eruptive action are roughly parallel, the mountain ranges trending south-southeast. The elevations are considerable, in Luzon the summits being frequently five and six thousand feet above the sea, while the loftiest, Mount Apo, in the center of Mindanao, is credited with 10,800 feet. Luzon is formed in the north by a central and two lateral cordilleras, while in the south the crests of one construct the long and jagged promontory of the Camarines.

Many of these volcanoes are active, and with their eruptions are associated frequent earthquakes, occasionally of ruinous severity. The city of Manila has on several occasions been almost destroyed by them. As in many volcanic districts, the soil is extremely fertile, and the mineral wealth of the islands is undoubtedly considerable, most of the river sands being auriferous. A comparatively small portion of the surface is cultivated, and much of it has scarcely been explored.

History.—A very few words will be sufficient to outline the history of the archipelago.

The Chinese, who had conquered large districts in Formosa as early as the seventh century of our era,¹ extended their explorations a few centuries later to Luzon, and in the thirteenth century they appear to have rendered considerable portions of that island tributary. The native tribes threw off this burden in the fourteenth century.

In March, 1521, Ferrando Magallanes, whom we know as Magellan, having sailed through the straits which bear his name and crossed the Pacific, was the first European to sight the Archipelago, of which he took possession for the crown of Spain. The first Spanish settlement was, however, not until 1565. Manila was founded in 1571 and became the capital city. It was captured by the English in 1762, but, with the islands, was restored to Spain by the Peace of Paris in 1764.²

¹ See Professor Gustave Schlegel in the *T'oung-pao*, vol. vi, No. 2.

² A very readable account of this is given by Mr Walter F. Lord in *The Lost Possessions of England*, pp. 169 et seq.

We are informed that the Spaniards possessed themselves of Luzon in the sixteenth century "almost without striking a blow, the natives having forgotten the art of war since they shook off the Chinese yoke."¹

General Ethnology,—It is impossible to reach accuracy in estimating the population of the islands. The Spanish census reports take account only of those who pay taxes, and the many wild tribes are of course not included. Estimates of the total population of the archipelago vary from five to ten million souls, but a conservative calculation would place it at six and a half millions. About one-half of these are on Luzon and the islands immediately adjacent; some 500,000 are on Mindanao; 100,000 on the Sulu islands, and the remainder on the central group which are collectively known as the Bisayas.

Of these, the pure whites, outside of those connected with the civil and military departments of the government, are not above 9,000, and those of white mixed blood about 12,000; the Chinese and Japanese near 50,000; the large remainder is made up of the two stocks which were found in possession of the islands at their discovery, to wit, the small black Negritos, now reduced to about 10,000, and the brown Malayan peoples, who are in the vast majority.

The ethnic and historic relations of these last two offer some interesting problems in anthropology.

It has been generally accepted, and many circumstances combine to render it probable, that the Negritos belong to the same race as the Papuans of New Guinea, and that they were the first inhabitants of all the large islands in this part of the ocean. They occupied them undisturbed by invaders until about 2,500 to 3,000 years ago, when their shores were attacked by Malaysians from the Asiatic mainland. The small blacks were either killed or had to take refuge in the interior of the islands, where the mountains and the jungles offered them protection. For this reason they are nowhere found upon the coast with the single exception of northeast Luzon. Here a remote and dangerous shore, devoid of harbors and peculiarly subject to violent storms, offered such obstacles to piratical descents that the Negritos could dwell there in peace.

¹ Mr E. J. Stanley, in *The Philippine Islands* (by Antonio de Morga), p. 19, note (Hakluyt Society Publication).

This, I say, is the generally accepted theory offered to explain the presence of these small blacks in the interior of Luzon, of Formosa, of Mindanao, Panay, Negros, and other members of this island world.

But not all writers have subscribed to it. Such an authority as Professor Theodore Waitz inclined to the view that the Negritos and Malaysians are of one race, modified by environment;¹ and Alfred Russell Wallace approaches the same position in his argument that Papuans, Melanesians, and Polynesians are merely sub-types of one variety of our species. Anthropologically we may accept such statements, for most of us are monogenists, and agree that "all men are of one blood;" but ethnographically we must maintain that the distinctions between Malayan and Negrito are as absolute as between any two races on earth.

A second general question relates to these Malaysians themselves. All who have carefully studied the subject agree that their presence in the Philippines represents several migrations, differing in time, dialect, and civilization. These, moreover, are generally recognized as three in number. The earliest immigrants were of rude culture and savage habits, allied to the Dayaks of Borneo, bringing with them the custom of head-hunting and similar savage propensities. They are represented today by the Apoyas, Zambales, Irayes, and Catalangans of Luzon. Their main body arrived centuries before the Christian era. The second migration was more cultured, acquainted with an alphabet, their modern descendants being the Tagalas, Bicolis, Bisayas, and Ilocanes. Their main body appeared between 100 and 500 A. D., and drove their predecessors of the same stock toward the north and into the interiors. Lastly, in the fourteenth and fifteenth centuries, the Islamitic propaganda brought Malays with deep infusion of Arabic blood and literature into the southern archipelago—the Sulu islands and the eastern shore of Mindanao. These are the so-called Moros—fanatical Mohammedans and daring pirates. This movement was going on when the Europeans arrived.

Such is the outline which Professor Blumentritt sketches of the Malayan immigration.² But it has not passed unchallenged, and certain French writers of distinction, notably De Quatrefages and Hamy, offer a remarkably different hypothesis.

¹ His opinions are presented in the fifth volume of his *Anthropologie der Naturvölker*, edited by Professor Gerland.

² In the introduction to his *Ethnographie der Philippinen*.

They have, shall I say, imagined? an early people, to whom they have given the name "Indonesians," an "allophylic" branch of the pure white race, "non-Aryan," therefore, who went forth from India about 500 B. C. and occupied portions of Borneo and Sumatra, passing thence to Mindanao, Luzon, and the neighboring islands. Modern examples of them are the Manobos of the first-mentioned island and the Tinguianes of Luzon.¹ They were driven back by the "Proto-Malays," represented by the modern Tagals. In other words, the Indonesians correspond to the first Malayan immigration of Blumentritt.

The arguments for the presence of this early white race are wholly anatomic, the skulls and facial forms of the descendants of the first migration more closely assimilating those of the white race than do the forms of the latter.² An easier explanation of this fact—if it really is a fact—would be that in later times the pure Malayan type had suffered changes through frequent cross-



FIG. 1.—DEFORMED SKULL FROM SAMAR (VIRCHOW).

ings with other types. After weighing the arguments carefully, I do not believe that they are sufficient to establish the Indonesian theory as advanced by the authors named.

Was there then any "pre-Malayan" population except the Negritos? Professor Virchow has recently discussed this question, and leans to the view that there may have been such a people. His *pièce justificative* is an artificially deformed skull exhumed from a cave in the island of Samar. Its form is shown in figure 1. He acknowledges that it resembles a Dayak skull, and as we

¹ "Manobos" is a vague name now applied to any of the wild tribes of Malayan origin in the interior of Mindanao. The Tinguianes are a very light-colored, peaceful people who live near Santiago, on the northwest coast of Luzon. Their features are, however, rather Mongolian than European (Blumentritt).

² De Quatrefages, *Hist. Gen. des Races Humaines*, pp. 515-517, 524, etc. Hovelacque and Hervé, in their *Précis d'Anthropologie*, pp. 475 et seq., accept the Indonesian theory, but hesitate to identify these immigrants with the white race.

know that the Bisayas who inhabited Samar flattened the skull by artificial methods, his conclusion seems unnecessary, to say the least.

Its position in a cave would seem to be in favor of its somewhat modern origin, as, according to Blumentritt, all the Philippine Malays in ancient times preferred to deposit their dead in caves whenever it was possible. Dr. Jagor describes a number of these which he visited near Basey, on the southern coast of the island of Samar.¹

I am not aware of any reports of paleolithic remains in the pleistocene deposits of the archipelago, and no archeologist seems to have studied methodically either these or the cave deposits.

The Negritos.—Politically, the Negritos are the least important of any of the stocks on the islands, but anthropologically they are perhaps the most interesting. We see in them as near an approach to primitive man as we can anywhere find, and it is much to be regretted that there has been no thorough and trustworthy study of their ethnology.²

Their number I have placed at about 10,000, which is the lowest I find offered; but I believe this is excessive, and at best it is a mere guess. Extremely shy and without fixed abodes, it has been impossible to count them even approximately. One thing is sure, that they are steadily disappearing, and in a generation or two will be extinct.

The word "Negrito" is a diminutive form of the Spanish "negro," black, and was given them on account of their short stature. Another name by which they are collectively known is "Aeta," or the "Aetas." Some say that this is derived from the Malayan *hêtam*, black, and others that it is from the Negrito tongue, in which *aita* means curly or woolly haired. I leave the point for others to decide. They have, of course, various local appellations. In northeast Luzon they are known as Dumagas

¹ His report on these is in the *Zeitschrift für Ethnologie*, Bd. 1, s. 80 et seq. Professor Virchow's article, "Die Bevölkerung der Philippinen," is in the *Sitzungsberichte* of the Royal Prussian Academy of Sciences, March, 1897.

² The principal authorities are Dr A. B. Meyer, who printed for private circulation (in 1878) an essay upon them, and Herr A. Schadenberg, whose articles appeared in the *Zeitschrift für Ethnologie*. The latter was an intelligent German druggist, established in Manila. The description by Dr Mundt-Lauff in *Natur*, 1879, is of doubtful value. (See Schadenberg, u. s., 1880, p. 134 et seq.) P. A. Paterno has published a monograph on the Negritos which might profitably have been much condensed, *Los Itas*, pp. 439 (Madrid, 1890).

and Bulagas; in Mindanao, as Hillunas; on some of the islands between these, as Mamanuas, and so on.

They are not found on the southern islands, nor on Palawan or Samar, but occur on Panay, Negros, Mindanao, and many parts of Luzon.

Physically, they are notably short in stature. The males average 1.45 m. in height—say, four feet ten or eleven inches—and the females are about an inch shorter. Some writers say they are muscular and strong, others that they are feeble. They are short-lived, becoming decidedly old at forty or forty-five years and rarely surviving until fifty.

The cubical capacity of their skulls is in fair proportion to their stature, being between 1,100 and 1,200 cubic centimeters. The skull itself is decidedly round, the cephalic index running up to about 85, on the average, with examples over 90. In this they are in marked contrast with the Mincopies of the Andaman islands, another Negrito stock, whose skulls are dolichocephalic. Their legs are extremely thin, almost destitute of calves, and their tibiæ are flattened or platynemic. This, however, is attributable to their habit of cowering around their fires on their haunches, which is their favorite pastime, even in the hottest weather. Their hair is distinctly wooly, their color black, and their faces prognathic, but not extremely so. Their toes are singularly prehensile, and they can use them almost as deftly as their fingers. The beard is usually scanty, but those in the peninsula of the Camarines are said to have it moderately abundant (figures 2 and 3).

In culture they are very primitive, owning no fixed habitations, not tilling the soil, making no pottery, and leading vagrant lives. Their clothing is merely a girdle. They have no musical instrument and no clubs. They occasionally use the blow-pipe, which some have borrowed from the Malays, but their chief weapon is the bow. This is about six feet long. In discharging it they rest on one knee, and use the "primary" release, that between the thumb and forefinger. Their arrows are well made and of three lengths. It is said that some tribes poison the tips, but this lacks confirmation. They are adepts in stone-throwing, and can readily kill birds, etc., in this way.

In fire-making they display extraordinary skill, and in the wettest of the rainy season they can start a blaze in two minutes

by the friction of two pieces of dry bamboo, which are kept for the purpose. A German explorer recommends travelers to learn this art, as he says it is "better than matches" in the damp forests.

Even among these wretches we discover a love of the beautiful, shown in the decoration of their arrows and combs and in the ornamentation of their persons. Some file their front teeth to a central point, giving them the shape of a saw, and there is reason to suppose that in a few hordes deformation of the head is practiced.¹



FIG. 2.—AETA GIRL.



FIG. 3.—AETA MAN (MONTANO).

Their family life is "patriarchal"—that is, the male is head of the family. The women do all the work, such as collecting wax and honey, which are their principal staples in trade.

Whatever has been said to the contrary, they are by no means devoid of religion. Little has been done in collecting their beliefs, but that little brings them at once into touch with early religious thought the world over. Their principal deity is the moon. When it is full they build a great fire and dance around it all night, chanting a lamentable appeal for aid, the words being a monotonous repetition of a refrain meaning,

Oh! we are very wretched;
Oh! we lead miserable lives.²

¹ Schadenberg, u. s., Bd. XII, s. 135.

² Schadenberg in *Zeit. für Ethnologie*, Bd. XII, s. 145.

When the missionaries urged the Dumagas to adopt sedentary habits they replied that their religion forbade them to take thought for the morrow, but to trust wholly in their gods to provide. Needless to say, the missionaries, who had heard this teaching in another quarter, were somewhat disconcerted.

They are inoffensive and shy, though it is their rule to kill a Tagala, if they can, when one of their own people dies, as they know the death comes from the black arts of these hereditary enemies; but if they do not find a Tagala a pig or a deer will do as well. To pledge friendship they suck blood from each other's arms.¹

The Papuan languages are not only wholly different from the Malayan dialects, but, again unlike the latter, present entirely distinct stocks among themselves.² Whether all the Negrito idioms of the Philippines are of the same stock is not known, the material about them being insufficient to decide the question. We have, in fact, no grammar of any Aeta dialect, and scanty vocabularies. The latter indicate that everywhere there has been large borrowing from Malayan, but that outside of such loan-words there is an independent tongue. All its numerals are Malayan, and all its culture-words. Its phonetics are vocalic and agreeable to the ear. In morphology it is rudely agglutinate, offering no grammatical distinction between subject and object, noun and verb. The pronoun is the principal element, and both suffixes and prefixes are employed.³

The Malayan Peoples.—Fully eleven-twelfths of the population of the archipelago are more or less purely of Malayan descent, and speak dialects of the widespread Malayan linguistic stock. These are those popularly termed "Filipinos." They vary widely in appearance, culture, and language; they have been classified either by location or by speech, and each method leaves much to be desired. The Spanish government officially recognized thirty-five different languages in the archipelago, and Professor Blumentritt, in arranging a scheme for the Ma-

¹ Blumentritt in *Zeit. Erdkunde*, Berlin, 189-, p. 63 et seq.

² Compare F. Müller, *Grundriss der Sprachwissenschaft*, Bd. I, Ab. II, s. 30, and Bd. II, Ab. II, s. 160.

³ Vocabularies of various Negrito dialects of Luzon are given by Schadenberg in *Zeit. für Ethnologie*, 1880, and by Arthur Baessler in the *Verhandlungen* of the Berlin Anthrop. Society, 1890.

layan population alone, divided it into fifty-one linguistic groups! ¹

It would be burdensome for my present purpose to enter into such details, and I shall, therefore, offer the following classification of the "Filipinos":

1. The mixed tribes of northern Luzon.
 2. The Tagals and Bicol of central and southern Luzon.
 3. The Bisayas of the central archipelago.
 4. The Moros of eastern Mindanao and the southern islands.
1. The mixed tribes in the north of Luzon represent crossings of the Malayan with Chinese and Negrito blood. The Ilocans of the northwest coast are markedly Chinese in appearance and



FIG. 4.—CALINGI GIRL.



FIG. 5.—CALINGI YOUTH (RATZEL).

speech. In the interior are the Calingis, in whose veins run Chinese, Malayan, and Negrito blood; the short, yellow Apoyaos, on the river Apoyao, of much the same compound; the Irayas, in the mountains near Palanan, a hybrid of Tagalas and Negritos; the Catalanganes, on the river Catalangan, half Tagalas and half Chinese; the Igorrotes of the western Cordillera, a Chinese-Japanese-Tagala group; the Ilongotes, in the eastern Cordillera, a rather pure but quite wild Tagala horde; the Calangans, on the upper river Taco, also of somewhat pure descent and also wild, and the Ibanacs, who inhabit the archipelago of the Babuyan.

¹ Good dictionaries and grammars of the following languages of the archipelago have been published by the Spanish missionaries: the Bicol, Bisaya, Ibanac, Ilocan, Pangasinan, and Tagala. Lengthy vocabularies of the Bontoc, Banaul, Ilocan, and Lepanto of northern Luzon, by Schadenberg, were printed in the *Verhandlungen* of the Berlin Anthropol. Soc. for 1889.

Many of these have never been converted to Christianity and preserve their ancient customs of tattooing their bodies, filing their teeth, and from time to time indulging their ancestral tendency to "head-hunting." The heads thus obtained are preserved by an elaborate process and suspended over their houses.²

They often dwell in buildings raised above the ground on piles, a number of these grouped together forming what the Spaniards call a *rancheria*. They are all to some degree sedentary and agricultural, and the majority of them are at least tinctured with Christianity and civilization. Their system of local government is patriarchal, and those who have not been converted are polygamous.

2. The Tagalas occupy central and southern Luzon. They are a comparatively pure type of the Malayan race and present one of its highest developments, along with its usual defects.

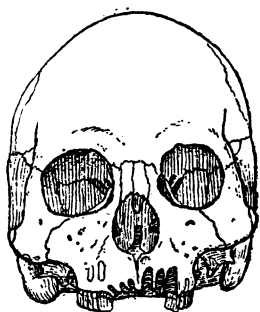


FIG. 6.—TAGALA SKULL, FRONT.

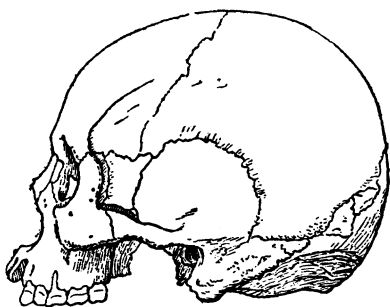


FIG. 7.—TAGALA SKULL, SIDE (QUATREFAGES).

The Tagala is brownish yellow in color, of moderate stature, skull mesocephalic and symmetrical. The cheek-bones are prominent, the nasal bridge low, the nostrils prominent, and the eyes narrow, not oblique, but slightly drooping at the inner canthus. These features give the peculiar Malayan cast of countenance. The hair is black, smooth, straight, and thick, the beard rather scanty. The mouth is large, the lips full, the chin short and round.

This description applies in its general outlines to the whole Malayan population of the archipelago.

The early Tagalas lived in patriarchal fashion, each village or

² Described by Schadenberg, *Verhandlungen*, Berlin Anthropol. Soc., 1889, p. 681.

rancheria having its *dato*, or head man, who watched over its interest. Their religion was a nature-worship, of which we have few particulars, and which they readily exchanged for the Christianity offered them by the Spanish missionaries.¹ Competent agriculturists, industrious, lovers of gain, and with pronounced commercial instincts, they extended their trade into far distant seas long before the Europeans arrived.

The moral character of the Tagalas and of the Malayans generally has not been well spoken of by most writers who have personally known them. Friederich Müller says of them that they are imitative, but devoid of originality; emotional, but without energy; proud, bigoted, vain, but unwilling to labor for real knowledge; harboring revengeful thoughts, but forgetful of benefits.² Gross laxity in sexual relations has been repeatedly mentioned, and it is said the lowest vices of the Chinese in this direction have become widely prevalent in Luzon.

It is to be hoped that these and similar statements, which I shall not repeat, have arisen from imperfect observation or from prejudiced sources, and that on the better acquaintance which we shall probably have with them, they will disprove such allegations.

It is said of them that they have a most eager love of gain, a passion which, properly directed, always makes strongly for civilization; but the employment to which all other passions are secondary is cock-fighting. Nowhere in the world is this carried on with such intense devotion. Chewing the betel or areca nut and immoderate smoking are universal to men, women, and children. Their staple food is rice, cooked preferably with fish.

The language of the Tagalas, called the Tagalog, is one of the highest developed dialects of the Malayan stock. Though belonging to the agglutinate class in its grammar, it approaches the inflective stage of development. Its phonetics are soft and harmonious, and to a linguist it is easy of acquisition. Excellent grammars and dictionaries of it have been prepared by the Spanish missionaries.

¹ F. Juan de Plasencia has left a brief description of the customs of the ancient Tagalas. Edited by P. A. Paterno in *El Barangay* (Madrid, 1892). The same writer published a work of 152 pages on *La Familia Tagalog* (Madrid, 1892) explaining the constitution of the Tagalan family. He is also the author of a fanciful work, *La antigua Civilizacion Tagalog* (Madrid, 1887).

² *Allgemeine Ethnographie*, pp. 295, 325.

From the earliest known times it has been a written language. The native alphabet consists of twelve consonants and three vowels, which do duty for five, being indicated usually by points in or above the letters. Originally it was written from above downward on canes, or from right to left on bark, but the missionaries introduced the writing from left to right. The early traveler, De Morga, who was in Manila about 1598, says: "Almost all the inhabitants, both men and women, write in this language well and with correctness."¹

The origin of this alphabet is curious. It can be traced back to a script found on very early Buddhist monuments in India, erected some five hundred years B. C., and is parallel, but not the same as, that in the records of King Asoka. This explains the otherwise puzzling fact that in all Malayan dialects of those who have this alphabet is found a notable percentage of Sanscrit words, and it is also a hint whence came those traits of the white race which gave rise to the "Indonesian" theory.

I can find few accounts of the old Tagalan literature, and these of no value. The missionaries say that it was frivolous and useless—songs, stories, divinations, and puzzles. This field is still uncultivated. Modern Tagala writings are largely in verse. Versification is extremely facile in this tongue, and boys on the street will improvise by the yard. The rhythm is by both accent and meter, but its rhyme is, in fact, only assonance, in which the quantities of the vowels are unimportant, provided that the same vowel recurs at the end of the line.² This to the English ear is no rhyme at all, as it is equivalent to ending the lines with such words as "man," "sad," "usual," "perhaps," which leave no rhythmical impression on our senses.

They are devoted lovers of music, the principal instruments being the lute, the flute, the *zuglum*, which is a guitar of two strings; the *togo*, made of bamboo, the strings being slivers of the bark raised on supports; and the *agun*, a sort of tomtom drum.

The Bicolis are the southern branch of the Tagalas, though with a distinct dialect. They dwell on the peninsula of Camarines

¹ *The Philippine Islands*, p. 294. General monographs on the various native alphabets of the archipelago have appeared, the most noteworthy of which are by E. Jacquet (Paris, 1831) and Pardo de Tavera (Paris, 1884). Both give illustrative plates.

² See Don José Rizal in the *Verhandlungen* of the Berlin Anthropological Society, Bd. XIX, p. 293. Rizal was himself a Tagalan poet of eminence. He fell a victim to the outbreak of 1898.

and on the northern portion of the adjacent island of Masbate. Like the Tagals, they were a cultured people, acquainted with the native alphabet and possessing a literature of their own.

3. What has been said of the physical appearance of the Tagalas applies sufficiently to the Bisayas also. They occupy the extremity of the Camarines peninsula and the islands of Samar, Leyte, Bohol, Cebu, Panay, northern Mindanao, and Palawan.

Under this general name may be included as near of kin the Subanos, on the peninsula of Sibuguey,¹ who are mostly pagans; the half-wild Mangianes of the island of Mindoro, the warlike Caragas on the east coast of Mindanao,² those tattooed natives whom the Spaniards called "Pintados" (painted), on the island of Samar, and the Calamianes, inhabiting the islands of the same name.

At the time of the discovery many of the Bisayas were as highly cultured as the Tagalas, and, indeed, superior to them (Blumentritt), but their less protected locations were unfavorable to their progress.

Whether the Bagobos and other wild tribes of the interior of Mindanao belong among the Bisayas, the material is lacking to determine. Their customs and myths have been described by Schadenberg, who lived among them for six months, and the vocabulary which he gives is evidently Malayan.³ He found them unspoiled by civilization, "uncommonly honorable," and stealing nothing but girls and horses; and this, he explains, was not out of wickedness, but in deference to ancestral custom!

4. Those whom the Spanish call the Moros or Moors are a mixed Semitic and Malayan population who wandered across from Borneo, first to the Sulu islands and then to Mindanao, bringing the Koran and its precepts and establishing several important principalities and sultanates. They were inveterate pirates and daring sea rovers. To this day one of their open boats will make the voyage to Singapore, a distance of 1,200 miles, without a compass. They were also learned in the law, and the eastern Sulu islands were long regarded as "the Mecca of the East" by the pious followers of Islam in eastern Asia. Now,

¹ For a description of these see an article by Sanchez in the *Zeitschrift der Ges. Erdkunde*, Berlin, 1896.

² These are often mentioned by the Spanish writers, but Blumentritt states that as a nation they do not now exist.

³ In *Zeitschrift für Ethnologie*, 1885, heft 1.

however, unless they are belied by the infidel Franks, their piety easily yields to the seductions of the juice of the grape and the flesh of swine.

It is not necessary that I should speak further of the remaining ethnic elements in the population of the Philippines, such as the Europeans, the Chinese, the Japanese, etc. Either for political or anthropological purposes, their peculiarities are well enough known, and for this reason I have given my chief attention to the two earliest stocks.

STUDY OF THE NORMAL TIBIA¹

DR ALES HRDLICKA

Associate in Anthropology, Pathological Institute of the N. Y. State Hospitals

The study of the tibia is one of a series of investigations undertaken by the writer on the large collection of normal bones in the New York College of Physicians and Surgeons. The opportunity for the study he owes to the professor of anatomy of the college, Dr E. Huntington.

The records represent an analysis of data derived from the examination of about 2,000 normal adult bones of persons of various nations and both sexes, and they show the variations in the shape and in the size of the tibia which occur in the white people. Additional studies were made on tibiae of negroes and of American Indians.

The most striking peculiarity of the normal tibia is its variability in shape. The bone is hardly ever exactly alike in any two skeletons, and it will occasionally differ markedly in the same body.

The differences in the extremities of the bone are relatively less. They will be referred to later. The variations in the shape of the shaft are very numerous; they can best be appreciated when we study the shaft in transverse sections, and especially when these are made at the measured middle of the bone. The lower part of the tibia is, as a rule, less well defined than its middle, and the upper part of the bone is in very many cases

¹ Preliminary report; read before the American Association for the Advancement of Science, August 25, 1898.